

ABSTRACT

5       An object of the present invention is to provide a Group III nitride semiconductor element which comprises a thick AlGaN layer exhibiting high crystallinity and containing no cracks, and which does not include a thick GaN layer (which generally serves as a light-absorbing layer in an ultraviolet LED).

10       The inventive Group III nitride semiconductor element comprises a substrate; a first nitride semiconductor layer composed of AlN which is provided on the substrate; a second nitride semiconductor layer composed of  $\text{Al}_{x_1}\text{Ga}_{1-x_1}\text{N}$  ( $0 \leq x_1 \leq 0.1$ ) which is provided on the first nitride semiconductor layer; and a third  
15       nitride semiconductor layer composed of  $\text{Al}_{x_2}\text{Ga}_{1-x_2}\text{N}$  ( $0 < x_2 < 1$  and  $x_1 + 0.02 \leq x_2$ ) which is provided on the second nitride semiconductor layer.